

Appl. Serial No. 10/697,154
Amendment dated 9/22/05
Reply to Office action of 06/22/2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended). A slam latch and strike assembly for releasably connecting together two adjacent support members that are relatively displaceable between a generally planar closed position and a relatively laterally displaced open position, comprising:

- (a) a generally tubular body adapted for connection with a first one of said support members, said body having a vertical longitudinal axis and a horizontal divider wall defining upper and lower chambers in said body, said body having at its lower end a wall portion containing a transverse opening communicating with said lower chamber;
- (b) a latch member mounted in said wall opening for axial displacement between retracted and extended positions relative to said body, said latch member including a first end portion that extends from said housing when said latch member is in said extended position;
- (c) spring means biasing said latch member toward said extended position relative to said body;
- (d) release means for displacing said latch toward said retracted position relative to said body; and
- (e) a strike member adapted for connection with a second one of said support members at a location adjacent said latch first end when said latch member is in said extended position, said strike member having a longitudinal axis generally parallel with said body longitudinal axis;
- (f) said latch member first end portion and said strike member having adjacent generally parallel surfaces each provided with a series of cooperating ratcheting latch teeth and strike teeth, respectively,
 - (1) said latch teeth and said strike teeth being in engagement when said latch is in said extended position and said support members are in said relatively closed position;

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- (2) the ratcheting configuration of said latch teeth and said strike teeth being such as to permit movement of said support members toward said closed position, but to prevent movement of said support members toward said open position;
- (3) ~~at least one of said adjacent latch end and strike member surfaces being convex, the transverse tips and valleys of the teeth carried by said convex surface being curved and having a radius of curvature corresponding generally to the radius of curvature of said convex surface, said latch teeth and said strike teeth, when in the engaged condition, having transverse tips contained in vertically spaced horizontal planes, respectively, all of said tips being curved and convex,~~ thereby to compensate for slight misalignment between said latch and strike members.

2. Cancelled.

3. (currently amended) A slam latch and strike assembly as defined in claim 2 1, wherein said strike member is cylindrical and has a circular cross-sectional configuration, the tips of said strike teeth being circular, said strike member containing a longitudinal bore for receiving a fastening member.

4. (currently amended) A slam latch and strike assembly as defined in claim 1, wherein said strike member has a generally polygonal cross-sectional configuration, and the tips of said strike teeth are arcuate.

5. (currently amended) A slam latch and strike assembly ~~as defined in claim 1,~~ wherein ~~said release means includes:~~ for releasably connecting together two adjacent support members that are relatively displaceable between a generally planar closed position and a relatively laterally displaced open position, comprising:

- (a) a generally tubular body adapted for connection with a first one of said support members, said body having a vertical longitudinal axis and a horizontal divider wall defining upper and lower chambers in said body.

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- said body having at its lower end a wall portion containing a transverse opening communicating with said lower chamber;
- (b) a latch member mounted in said wall opening for axial displacement between retracted and extended positions relative to said body, said latch member including a first end portion that extends from said housing when said latch member is in said extended position;
- (c) spring means biasing said latch member toward said extended position relative to said body;
- (d) release means for displacing said latch toward said retracted position relative to said body, said release means including:
- (1) a release handle pivotally connected with said body for pivotal displacement about an axis normal to the plane that contains the longitudinal axes of said body and said latch member, said handle being displaceable between a locked position within said body upper chamber and a released position extending from said body chamber; and
 - (2) rack and pinion gear means connecting said latch member with said handle for displacement between said extended and retracted positions relative to said body when said handle is in said locked and released positions, respectively[.] ;
- (e) a strike member adapted for connection with a second one of said support members at a location adjacent said latch first end when said latch member is in said extended position, said strike member having a longitudinal axis generally parallel with said body longitudinal axis;

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- (f) said latch member first end portion and said strike member having adjacent generally parallel surfaces each provided with a series of cooperating ratcheting latch teeth and strike teeth, respectively,
- (1) said latch teeth and said strike teeth being in engagement when said latch is in said extended position and said support members are in said relatively closed position;
- (2) the ratcheting configuration of said latch teeth and said strike teeth being such as to permit movement of said support members toward said closed position, but to prevent movement of said support members toward said open position;
- (3) said latch teeth and said strike teeth, when in the engaged condition, having transverse tips contained in vertically spaced horizontal planes, respectively, all of said tips being curved and convex, thereby to compensate for slight misalignment between said latch and strike members;
- (g) said body wall transverse opening comprising an axially extending slot contained in the bottom end of said body member; and further including an end plate connected with said body member to close said body member bottom end.

6. Cancelled

7. (currently amended) A slam latch and strike assembly as defined in claim 6 5, wherein said end plate contains guide means for guiding said latch member during the displacement thereof between said extended and retracted positions relative to said body member.

8. (currently amended) A slam latch and strike assembly as defined in claim 5, wherein the upper end of said body member includes an outwardly extending external annular annular flange portion adapted for seated engagement with the adjacent surface of the first support member, when said body member is mounted in a corresponding opening contained therein, said body member being externally threaded; and further including:

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- (a) lock nut means threadably connected with said body member beneath the first support member, thereby to lock said body member to the first support member.

9. (currently amended) A slam latch and strike assembly as defined in claim 8 5, and further including a pivot shaft non-rotatably connected with said release handle, said rack and pinion means including a pinion gear non-rotatably connected with said pivot shaft for angular displacement with said release handle, and O-ring seal means mounted on said pivot shaft, thereby to seal the assembly against leakage.

10. (currently amended) A slam latch and strike assembly as defined in claim 9 8, and further including an annular gasket arranged concentrically about said body, said gasket being compressed between said body annular flange portion and the adjacent surface of the first support member.

11. (original claim) A slam latch and strike assembly as defined in claim 5, and further wherein said rack and pinion means includes a rack member, said latch member being connected for sliding movement relative to said rack member in the retracted direction against the biasing force of said spring means.

12. (original claim) A slam latch member as defined in claim 5, wherein said body, latch member, handle member, rack, rack and strike are formed from a corrosion-resistant synthetic plastic material.